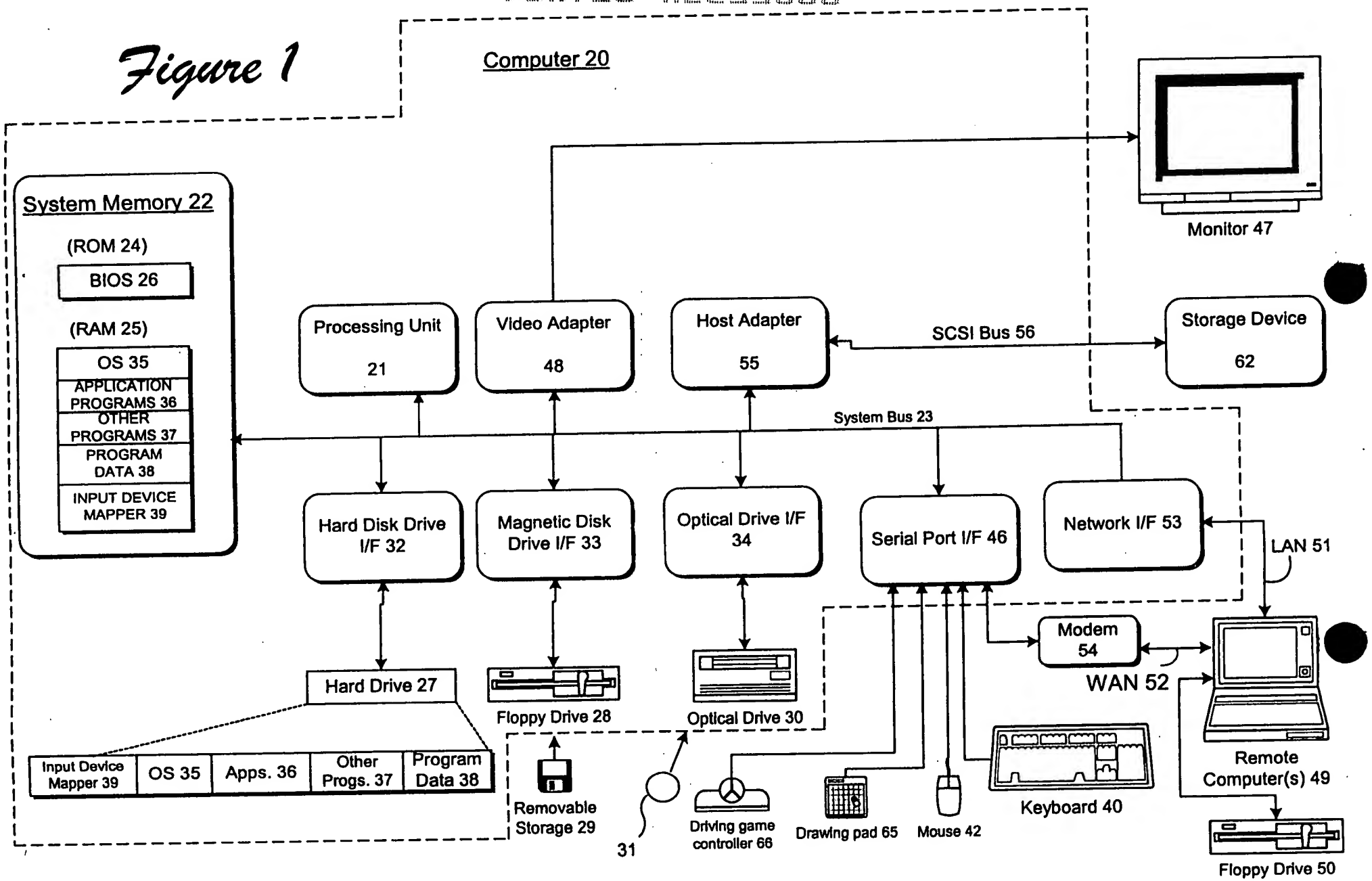
TOHTSO" h2SS860

Figure 1



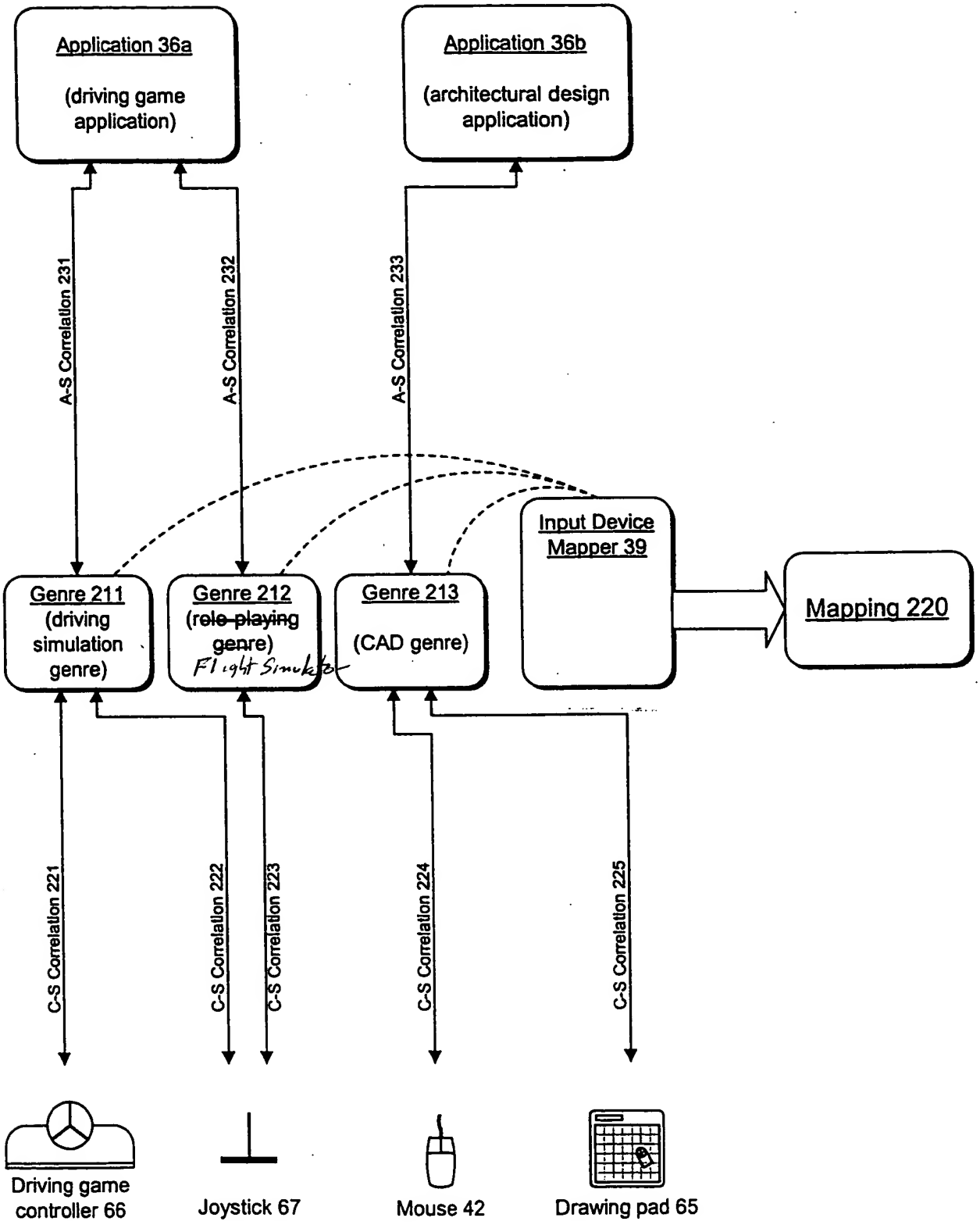

Application 36a
(driving game application)
Application 36b
(architectural design application)
A-S Correlation 231
A-S Correlation 232
A-S Correlation 233
Input Device Mapper 39
Mapping 220
Genre 211 (driving simulation genre)
Genre 212 (~~role-playing~~ genre)
Flight Simulator
Genre 213 (CAD genre)
C-S Correlation 221
C-S Correlation 222
C-S Correlation 223
C-S Correlation 224
C-S Correlation 225
Driving game controller 66
Joystick 67
Mouse 42
Drawing pad 65

Figure 2

TOATSO" h2559860

Figure 3

C-S Correlation 221

CONTROL ON DEVICE 66	SEMANTIC
Trigger 1	FIRE
Button 1	SHIFT UP
Steering Wheel	STEER
Right Pedal	ACCELERATE
Left Pedal	DECELERATE
Button 2	TALK
Vibrate	RUMBLE
.	.
.	.
.	.

301

302

Figure 4

A-S Correlation 231

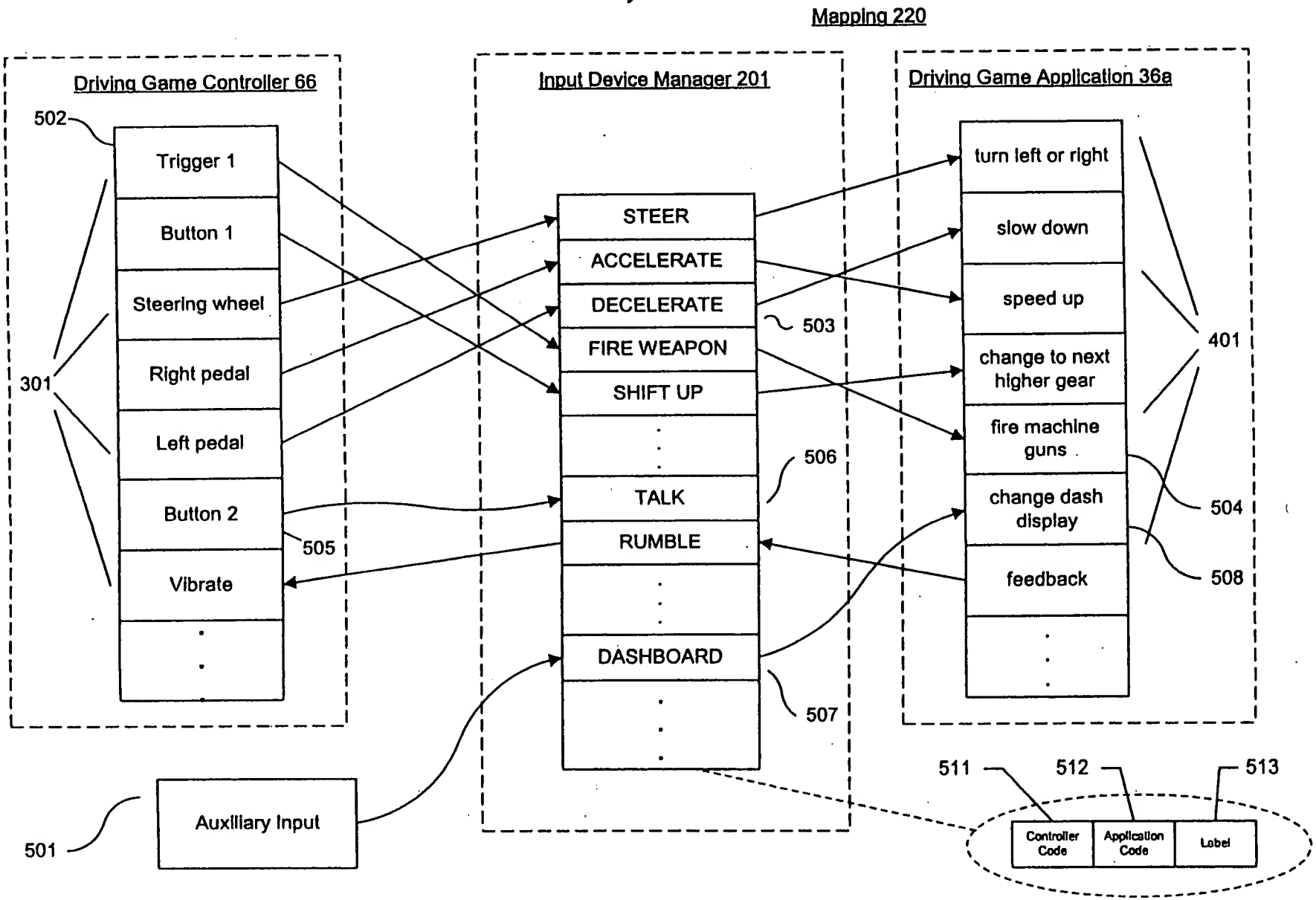
ACTION IN APPLICATION 36a	SEMANTIC
turn left or right	STEER
speed up	ACCELERATE
slow down	DECELERATE
change to next higher gear	SHIFT UP
fire machine guns	FIRE
change dash display	DASHBOARD
feedback	RUMBLE
.	.
.	.
.	.

401

402

T0+T50" +/25S860

Figure 5



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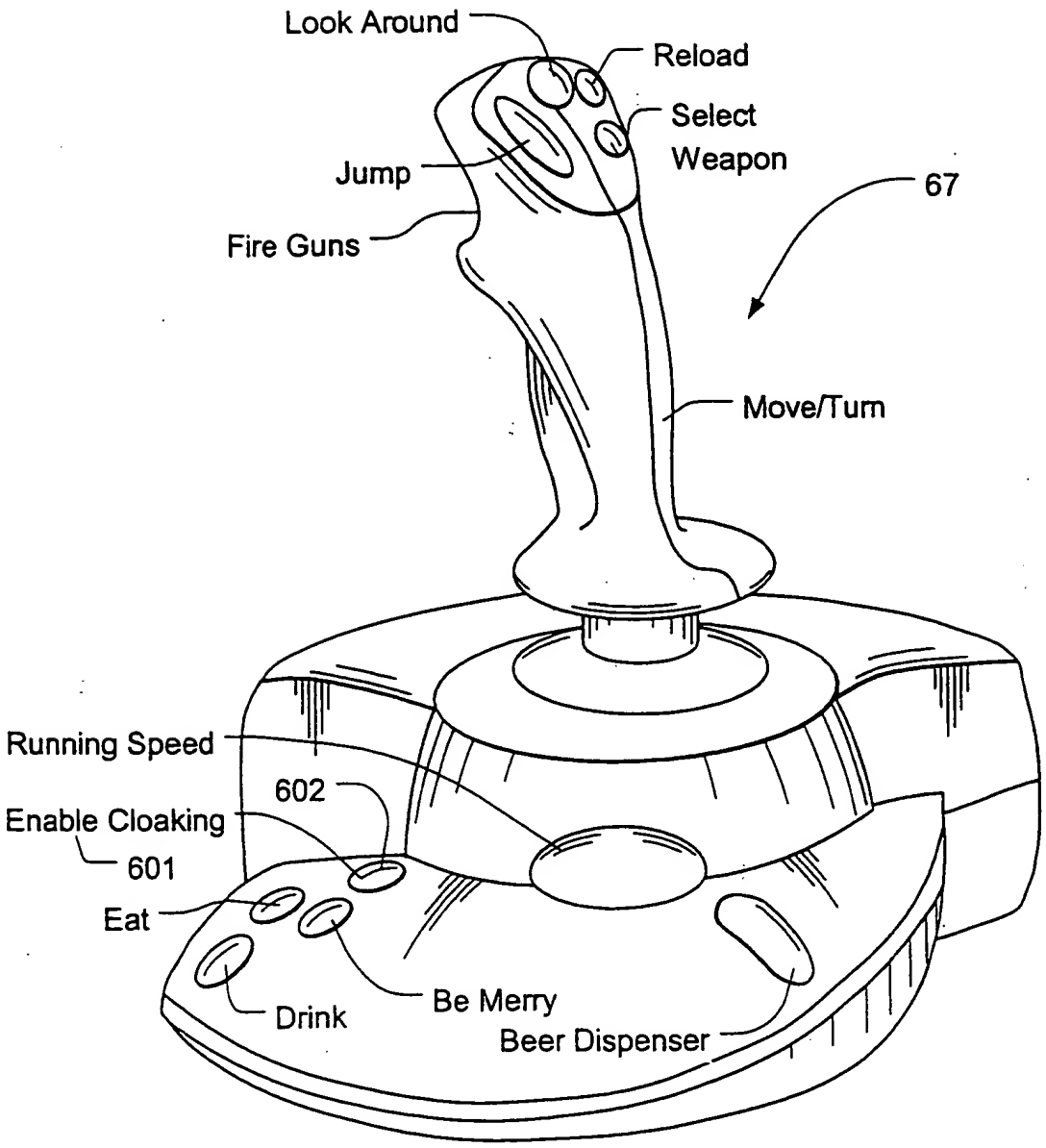
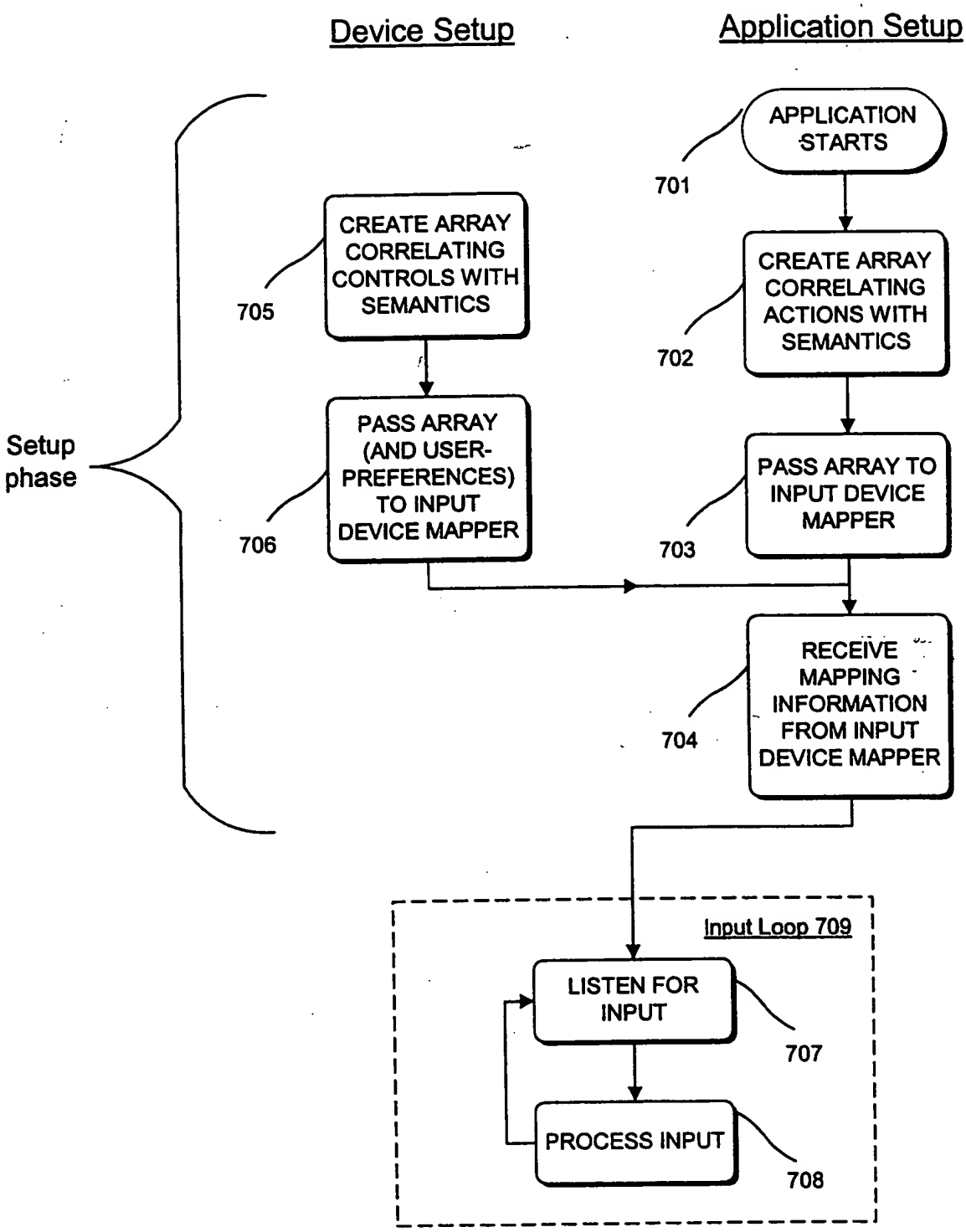


Figure 6

Figure 7


Device Setup
Application Setup
Setup phase
APPLICATION STARTS
701
CREATE ARRAY CORRELATING ACTIONS WITH SEMANTICS
702
PASS ARRAY TO INPUT DEVICE MAPPER
703
RECEIVE MAPPING INFORMATION FROM INPUT DEVICE MAPPER
704
CREATE ARRAY CORRELATING CONTROLS WITH SEMANTICS
705
PASS ARRAY (AND USER-PREFERENCES) TO INPUT DEVICE MAPPER
706
Input Loop 709
LISTEN FOR INPUT
707
PROCESS INPUT
708

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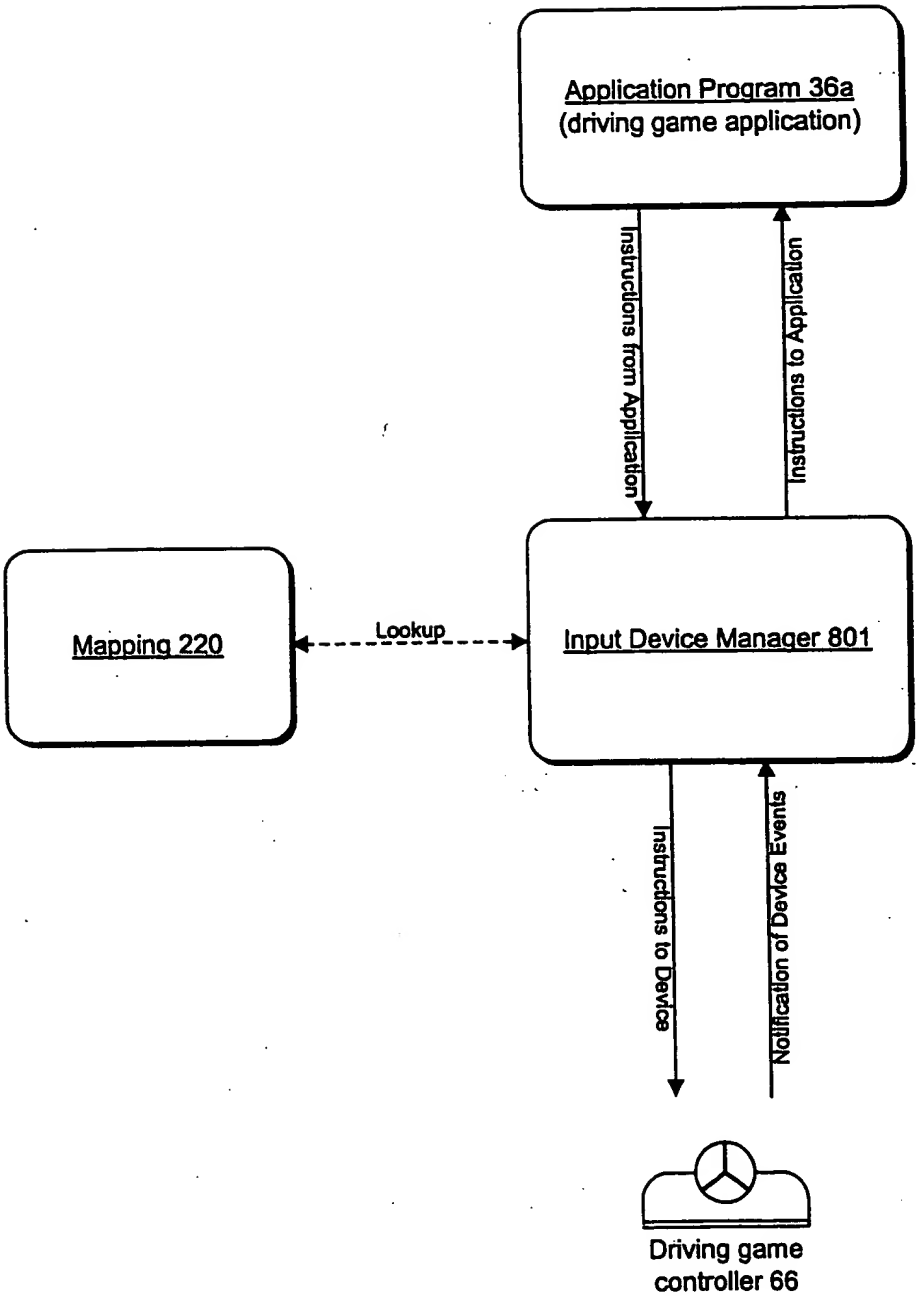

Figure 8

Figure 9

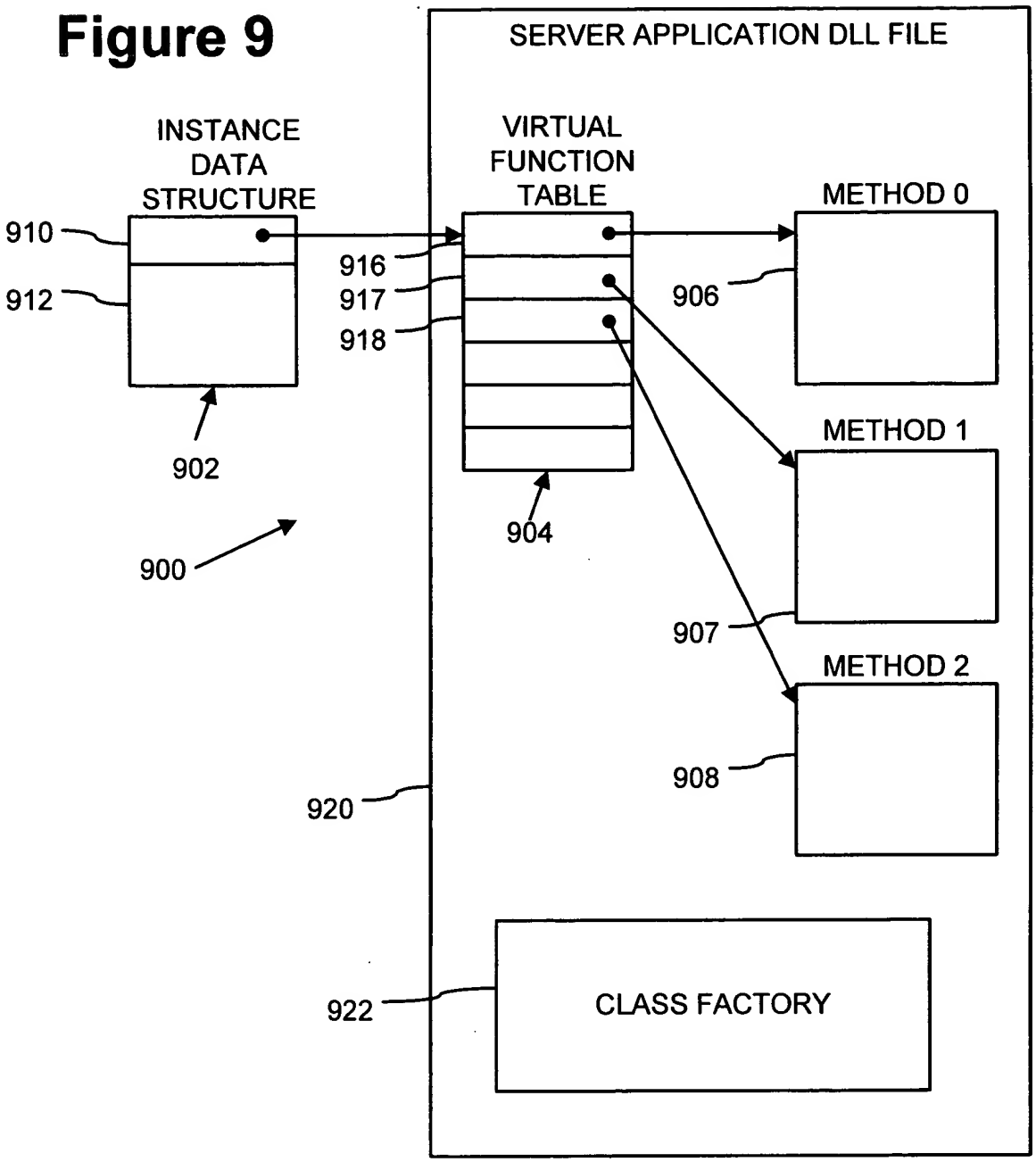
SERVER APPLICATION DLL FILE
INSTANCE DATA STRUCTURE
VIRTUAL FUNCTION TABLE
METHOD 0
METHOD 1
METHOD 2
CLASS FACTORY
910
912
902
900
916
917
918
904
906
907
908
920
922

Figure 10

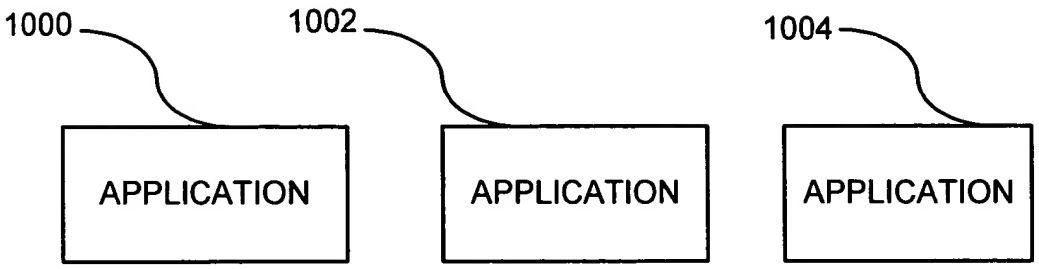

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Figure 11

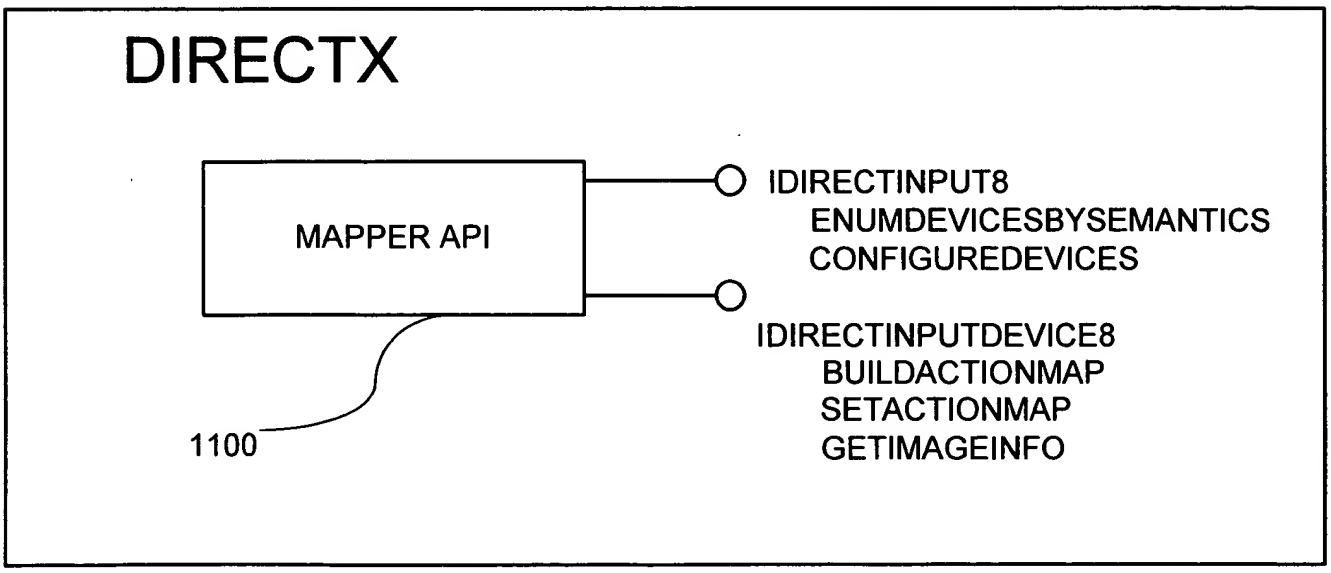
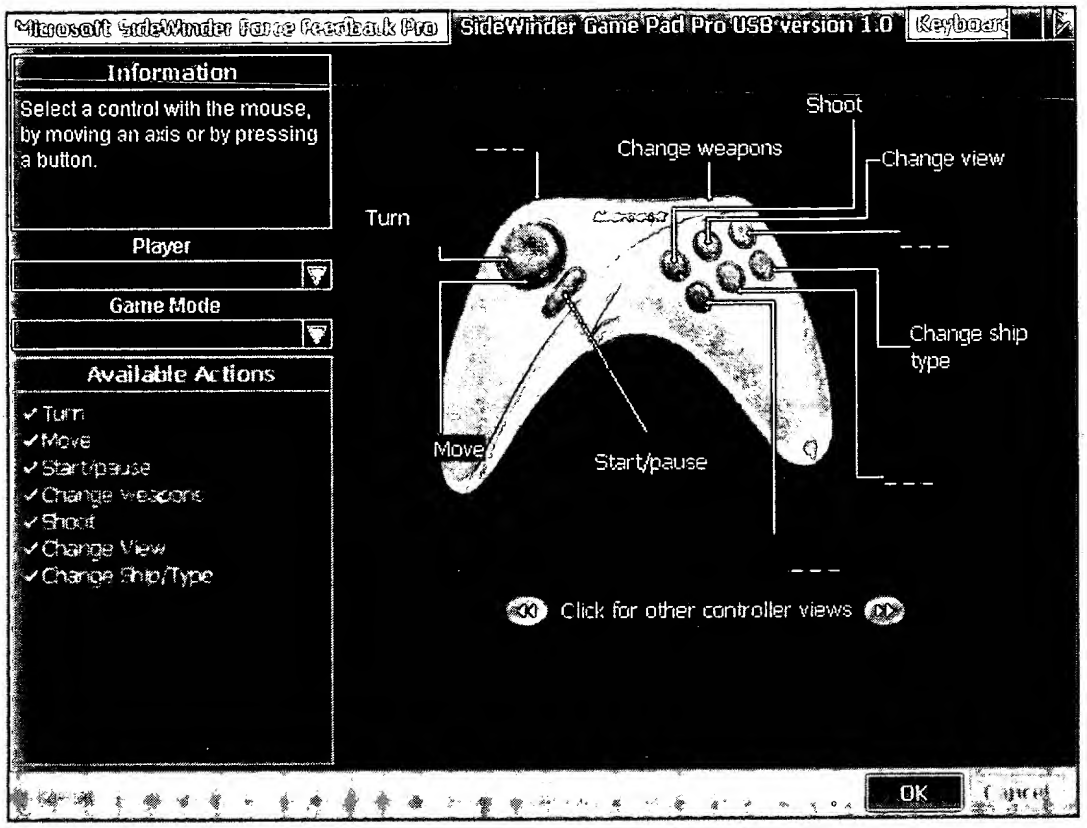
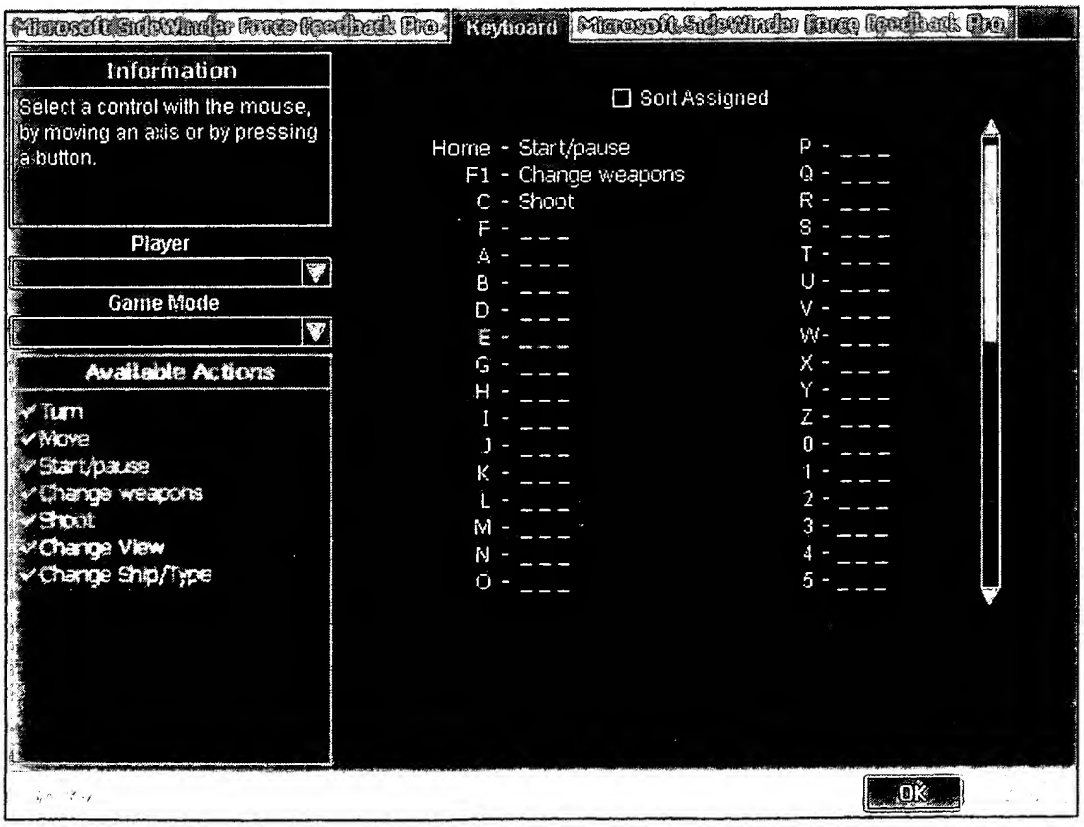


Figure 12

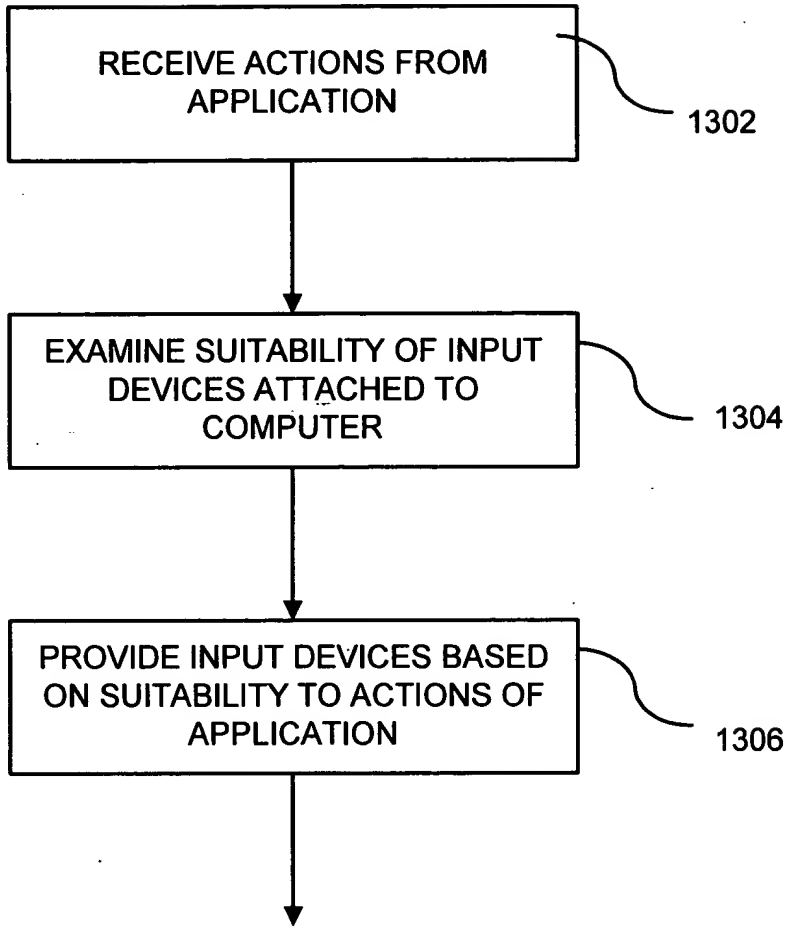




09955244 - 051404

Figure 13

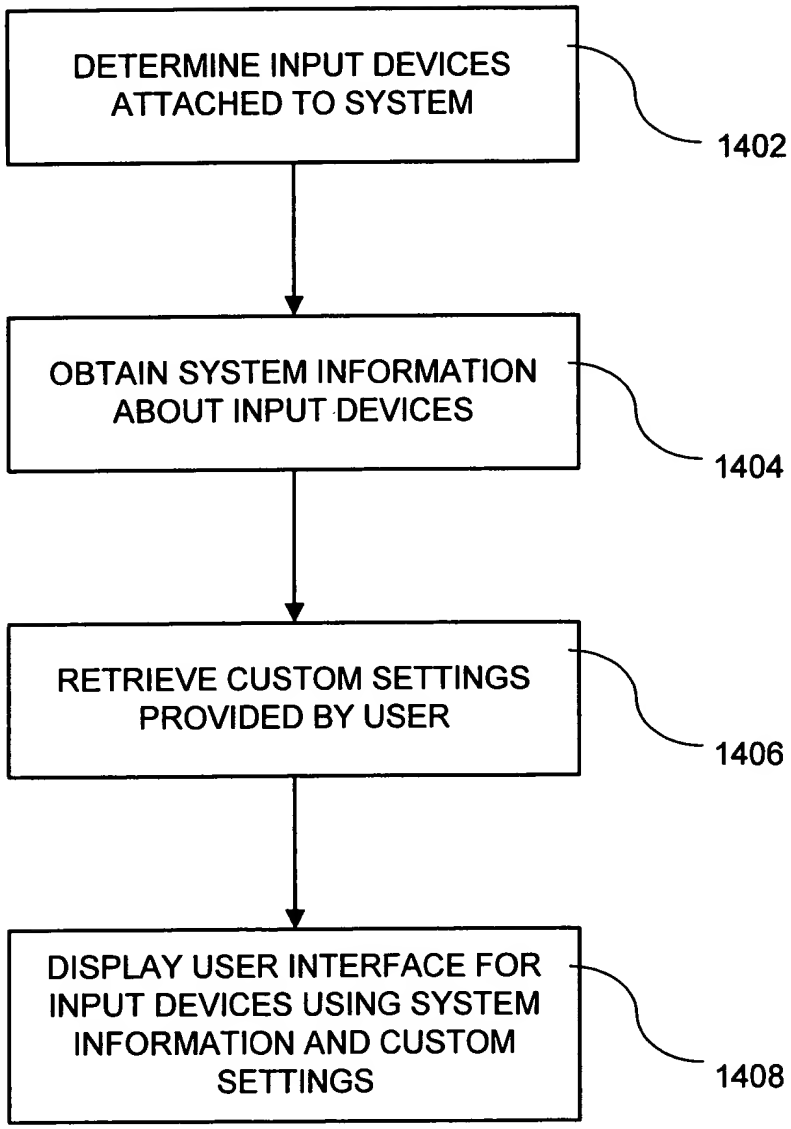
ENUMDEVICESBYSEMANTICS



0852744.05440

Figure 14

CONFIGDEVICES



9955274 - 05144

Figure 15

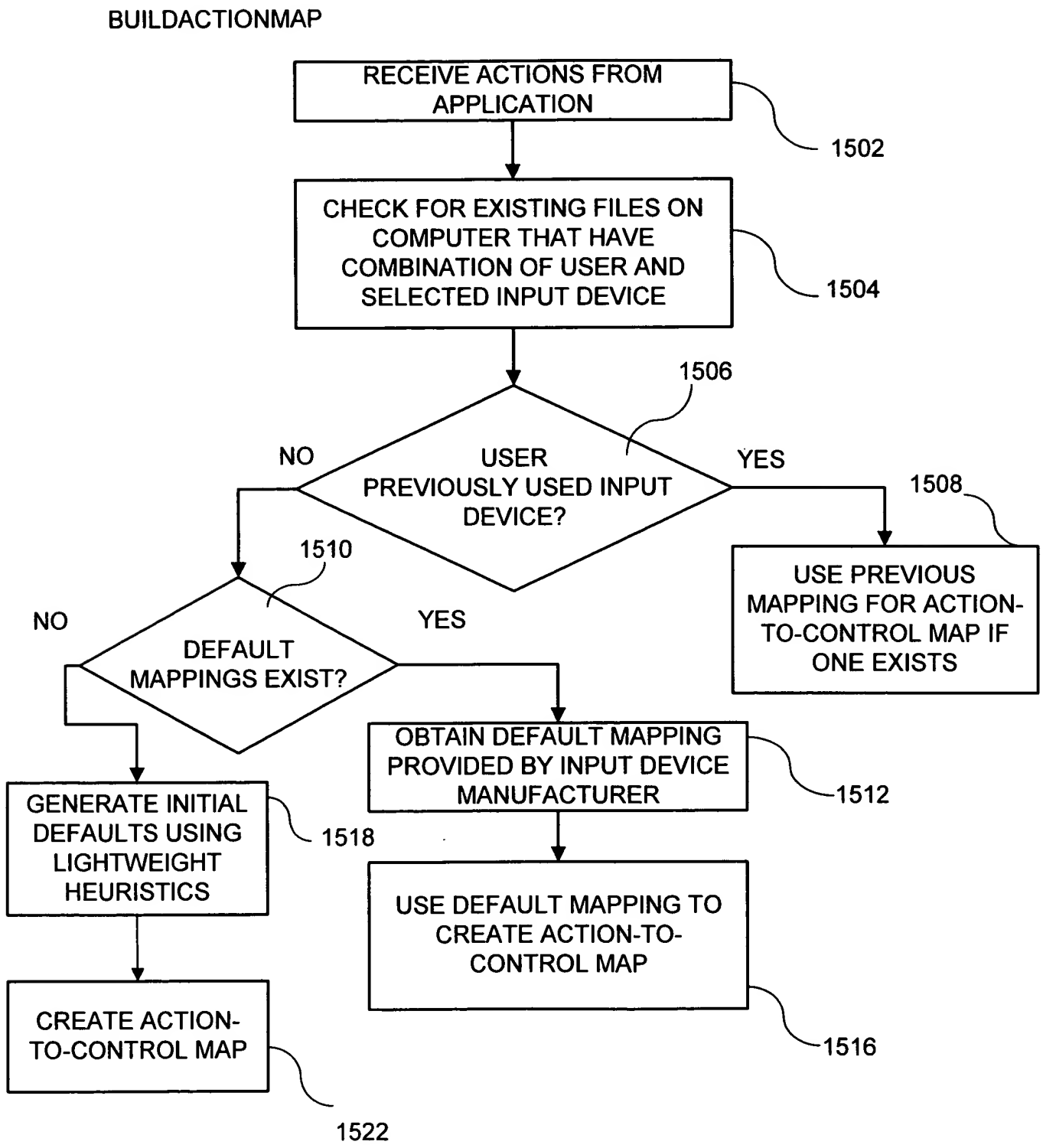

BUILDACTIONMAP
RECEIVE ACTIONS FROM APPLICATION
1502
CHECK FOR EXISTING FILES ON COMPUTER THAT HAVE COMBINATION OF USER AND SELECTED INPUT DEVICE
1504
1506
USER PREVIOUSLY USED INPUT DEVICE?
NO
YES
1508
USE PREVIOUS MAPPING FOR ACTION-TO-CONTROL MAP IF ONE EXISTS
1510
DEFAULT MAPPINGS EXIST?
NO
YES
OBTAIN DEFAULT MAPPING PROVIDED BY INPUT DEVICE MANUFACTURER
1512
GENERATE INITIAL DEFAULTS USING LIGHTWEIGHT HEURISTICS
1518
USE DEFAULT MAPPING TO CREATE ACTION-TO-CONTROL MAP
1516
CREATE ACTION-TO-CONTROL MAP
1522

Figure 16

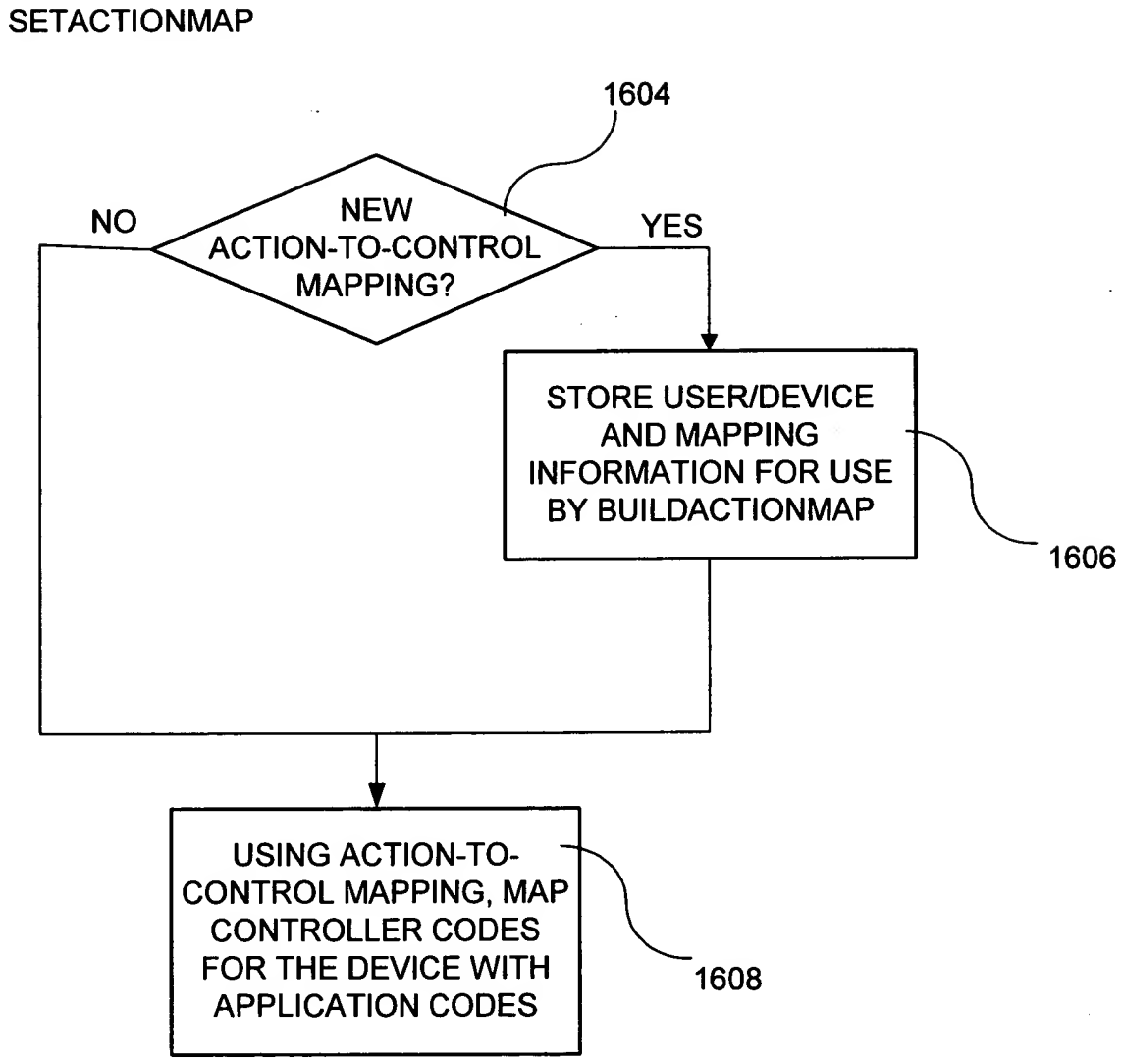
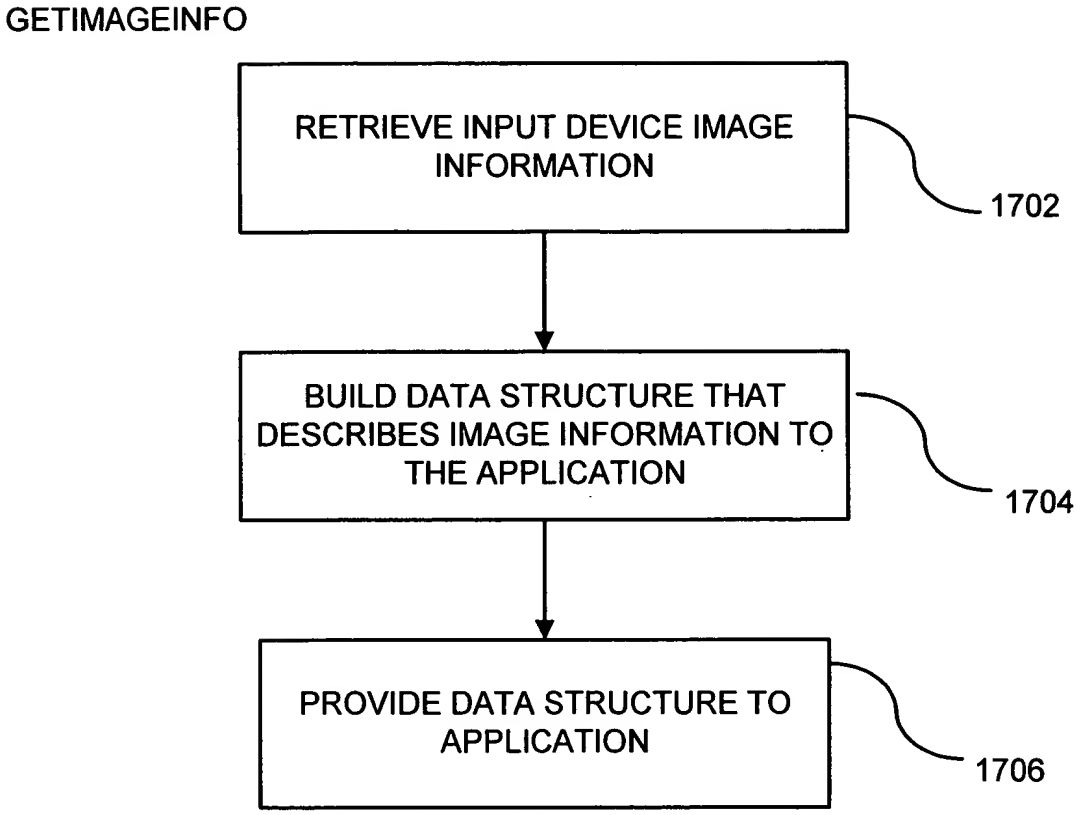

SETACTIONMAP
1604
NO
NEW ACTION-TO-CONTROL MAPPING?
YES
STORE USER/DEVICE AND MAPPING INFORMATION FOR USE BY BUILDACTIONMAP
1606
USING ACTION-TO-CONTROL MAPPING, MAP CONTROLLER CODES FOR THE DEVICE WITH APPLICATION CODES
1608

Figure 17



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